COMPARING QUANTITIES

APPLICATIONS OF COMPOUND INTEREST FORMULA

EXERCISE

Q.1	The value of a machine depreciates at the rate of 10% every year. it was purchased 3 year ago. If its present value is Rs. 8748, its purchase price was					
	(A)	Rs. 10000	(B)	Rs. 11372		
	(C)	Rs. 12000	(D)	Rs. 12500		
Q.2	The number of bacteria in a certain culture doubles every hour. If there were 30 bacteria present in the culture originally, how many bacteria will be present at the end of 2nd hour 4th hour and nth hour?					
Q.3	Find the population of a city after 2 years which is at present 12 lakh, if the rate of increase is 4%. p. a.					
Q.4	The population of a city decreased from 25,000 to 24,500. Find the percentage decrease.					
Q.5	The value of a machine depreciates every year by 5%. If the present value of the machine be Rs. 100,000 What will be its value after two years?					
	(a)	Rs. 100,050	(b)	Rs. 90,250		
	(c)	Rs. 99,250	(d)	Rs. 99,000		
Q.6	Three years ago, the population of a town was 50000. If the annual increase during three successive years be at the rate of 5%, 4% and 3% respectively. What is the present population?					
Q.7	In a laboratory, the count of bacteria in a certain experiment was increasing at the rate of 2.5% per hour. Find the bacteria at the end of 2 hours, if the count was initially 5.06.000.					

Q.8 The price of commodity X increases by 40 paise every year, while the price of commodity Y increases by 15 paise every year. If in 2001, the price of commodity X was Rs. 4.20 and that of Y was Rs. 6.30, in which year commodity X will cost 40 paise more than the commodity Y?

(a)	2010	(b)	2011
(c)	2012	(d)	2013

- **Q.9** A TV was bought at a price of Rs.21000. After 1 year, the value of the TV was depreciated by 5%. (Depreciation means reduction of the value due to use and age of the item). Find the value of the TV after 1 year.
- **Q.10** The current population of a town is 10,000. If the population increases by 10% every year, then the population of the town after three years will be

(a)	13,310	(b)	13,500

(c) 14,000 (d) 14,500

Answer key

- **1.** (C)Rs. 12000
- **2.** (30)(2)ⁿ
- **3.** 1297920
- **4.** 2%
- **5.** (b)Rs. 90,250
- **6.** present population =56238Rs
- **7.** 531616 (approx.)
- **8.** (b)2011
- 9. Rs. 19950
- **10.** (a)13,310